



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/707,907

01/23/2004

Michael Ben Sellers

139773

1906

23413 7590 10/30/2008  
CANTOR COLBURN, LLP  
20 Church Street  
22nd Floor  
Hartford, CT 06103

EXAMINER

WEATHERBY, ELLSWORTH

ART UNIT

PAPER NUMBER

3768

NOTIFICATION DATE

DELIVERY MODE

10/30/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/707,907	SELLERS, MICHAEL BEN	
	<b>Examiner</b>	<b>Art Unit</b>	
	ELLSWORTH WEATHERBY	3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,12-18 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,12-18 and 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-3, 12-15, 17 and 21-22 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 7,190,170. Although the conflicting claims are not identical, they are not patentably distinct from each other because both substantially claim the same subject matter including first and second magnetic elements and an epoxy or glue disposed between the first and second elements where the epoxy or glue contains a plurality of particles, including microparticles or nanoparticles, uniformly suspended in the epoxy or glue to resist discharging. Although the ‘170 patent does not expressly teach a chemical hardening compound and a particular volume percentage of the particles, however one

of ordinary skill would recognize that the broader '170 patent having a means for resisting discharges would teach on the particular volume percentage limiting current to less than 10 microamps. It would have been obvious to modify the '170 patent to include the hardener. The motivation to modify the '170 patent would have been to provide added structural integrity to the electrical discharge limiting compound disposed in the electromagnetic coil.

***Claim Rejections - 35 USC § 103***

3. Claims 1-2, 6-7, 12-15, 17-18, 21-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz et al. (USPN 6,642,717) in view of Wang et al. (Pub. No.: 2004/0225213).

4. Dietz et al. '717 teaches a gradient tube extending along an axis, the tube including first and second gradient coils (abstract; col. 2, l. 35- col. 3, l. 30) and a conductive compound disposed between the first and second gradient coils (col. 2, ll. 36-67; Figure, ref. 34), the conductive compound being an epoxy resin or glue having a plurality of conductive particles and a chemical hardening compound therein (col. 2, ll. 56-col. 3, l. 10; col. 3, ll. 43-55), and a plurality of conductive particles 38 disposed substantially uniformly within the resin or glue (col. 3, ll. 11-29), at least a portion of the plurality of conductive particles being in the range of 1-10 micrometers in diameter configured to limit a current flowing through the device (col. 3, ll. 26-30; claim 5). Regarding the limitation including 10 microamps, the Examiner stands that Applicant has not disclosed any particular criticality of the 10 microamp limit. Therefore, absent

Art Unit: 3768

any criticality, the limit "less than 10 microamps" is not given patentable weight over Dietz et al. '717 because both Dietz et al. '717 and the present application are concerned with limiting current.

5. Dietz et al. '717 teaches all the limitations of the claimed invention except for expressly teaching that the glue comprises a polyester resin. Dietz et al. '717 also does not expressly teach the use of silver or gold particles. Dietz et al. '717 also does not expressly teach that the volume percentage of the plurality of conductive particles is 0.1% or less of a volume of the conductive compound.

6. In the same field of endeavor, Wang et al. '213 teaches a MRI coated assembly (abstract). Wang et al. '213 goes on, teaching as known in the art using a polyester compound in a glue [0242]. Wang et al. '213 also teaches the use of ferromagnetic particles embedded in a resinous material at a concentration of about 0.001% to about 10% [0010]. Wang et al. '213 further teaches the use of electrically conductive particles including silver or gold [0206].

7. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coated gradient coils of Dietz et al. '717 in view of the coatings of Wang et al. '213. The motivation to modify Dietz et al. '717 in view of Wang et al. '213 would have been to select any resin mixture from a finite list of well known resin mixtures commonly used in the art to be used with MRI with reasonable expectations of success, as taught by Wang et al. '213 [0242].

Art Unit: 3768

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz et al. (USPN 6,642,717) in view of Wang et al. (Pub. No.: 2004/0225213) as applied to claim 1 above, and further in view of Doty (USPN 5,530,355).

9. Dietz et al. '717 in view of Wang et al. '213 teaches all the limitations of the claimed invention except for expressly teaching that the conductive particles comprise carbon particles.

10. In the same field of endeavor, Doty '355 teaches using carbon particles in a shielded coil system (col. 14, l. 57- col. 15, l. 13).

11. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coated gradient coils of Dietz et al. '717 in view of Wang et al. '213 with the use of carbon particles of Doty '355. The motivation to modify Dietz et al. '717 in view of Wang et al. '213 with Doty '355 would have been to aid in casting or curing, as taught by Doty '355 (col. 14, l. 57- col. 15, l. 13).

12. Claims 5 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz et al. (USPN 6,642,717) in view of Wang et al. (Pub. No.: 2004/0225213) as applied to claims 2 and 22 above, and further in view of Lehne et al. (USPN 5,235,283).

13. Dietz et al. '717 in view of Wang et al. '213 teaches all the limitations of the claimed invention except for expressly teaching that the epoxy resin comprises a bisphenol-A resin.

14. In the same field of endeavor, Lehne et al. '283 teaches using biphenol-A resin in an epoxy resin (col. 4, ll. 39-58).

Art Unit: 3768

15. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coated gradient coils of Dietz et al. '717 in view of Wang et al. '213 with the bisphenol-A resin of Lehne et al. '283. The motivation to modify Dietz et al. '717 in view of Wang et al. '213 with Lehne et al. '283 would have been to aid in casting or curing, as taught by Lehne et al. '283 (col. 4, ll. 39-58).

### ***Response to Arguments***

16. Applicant's arguments with respect to claims 1-3, 5-7, 12-18 and 21-24 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLSWORTH WEATHERBY whose telephone number is (571) 272-2248. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3768

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EW

/Long V Le/  
Supervisory Patent Examiner, Art Unit 3768